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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,981	04/12/2001	Naohito Hanai	108916	8026

25944 7590 04/18/2003

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EXAMINER

MCCARTNEY, LINZY T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,981

Applicant(s)

HANAI ET AL.

Examiner

Linzy McCartney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 8, 10, 11-13, 19, 21, 22 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent No. 6,456,289 to O'Brien et al. (O'Brien).

- a. Referring to claim 1, O'Brien discloses means which changes a state of an elemental object among the plurality of elemental objects in accordance with occurrence of an event (column 10, lines 34-43; column 16, lines 2-29 and 44-58; Fig. 10); state change propagation means which propagates the state change to another elemental object which belongs to the same aggregate object as the changed elemental object (column 15, lines 62-67 and column 16, lines 2-29); and image generation means which generates an image in accordance with a state of an elemental object (column 6, lines 9-29).

- b. Referring to claim 2, O'Brien discloses wherein in the image generation at least one of the shape, color, position, rotation angle, direction, moving direction and moving speed is changed in accordance with the state change of the elemental object (column 16, lines 2-29; Figs. 13, 14, 16, and 18).

- c. Referring to claim 8, O'Brien discloses wherein the state change propagation means is provided for each object (column 14, line 31 -42).

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d. Referring to claim 10, O'Brien discloses wherein the aggregate object is formed by assembling the elemental objects having different shapes without any gaps (Fig. 15A).

e. Referring to claim 11, O'Brien discloses where an image of the aggregate object is generated as an image of a single object before the occurrence of an event, and the image is generated as an image of the aggregate object formed by the plurality of elemental objects after the occurrence of the event (Figs. 13, 14, 16, and 18; column 10, lines 34-43).

f. Claims 12, 13, 19, 21, and 22 are rejected with the rationale of the rejections of claims 1, 2, 8, 10, and 11. Claims 12, 13, 19, 21, and 22 recite substantially the same limitations as recited in claims 1, 2, 8, 10, and 11 respectively, except that each of the aforementioned claims recite the additional limitation of a program embodied on an information storage medium or in a carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 4, 6, 7, 14, 15, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claims 1 and 12 above in view of U.S. Patent No. 6,054,992 to Gibson.

a. Referring to claim 3, O'Brien discloses state monitor means which monitors a state of another elemental object belonging to the same aggregate object (column 16, lines 2-29 and Fig. 9); state change means which changes a state of an elemental object when a state of another elemental object which has a predetermined relationship with the elemental object has changed (column 16, lines 2-29 and Fig. 9). O'Brien does not explicitly disclose state hold means which holds a state of an elemental object. Gibson discloses the aforementioned limitation (column 6, lines 13-28). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the system of O'Brien with the teachings of Gibson. The suggestion/motivation for doing so would have been because it is well known in the art to store state data of an object in a data structure and it would allow individual elements to be arbitrarily located (Gibson, column 6, lines 17-20).

b. Referring to claim 4, O'Brien discloses wherein the state change means of the state change propagation means changes a state of an elemental object when a state of another elemental object which has a predetermined positional relationship with the elemental object has changed (column 15, lines 62-67; column 16, lines 2-29).

c. Referring to claim 6, O'Brien discloses wherein the state change means of the state change propagation means changes the state of the elemental object after a given time has elapsed from the state change of another elemental object (column 16, lines 2-29, Fig. 9).

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- d. Referring to claim 7, O'Brien discloses wherein the state change means of the state change propagation means changes a first state of an elemental object into a second state after a given time has elapsed (column 16, lines 2-29, Fig. 9).
 - e. Claim 14 is rejected per claim 12 with the rationale of the rejection of claim 3. Claim 14 recites the additional limitation of a program embodied on an information storage medium or carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).
 - f. Claim 15 is rejected per claim 14 with the rationale of the rejection of claim 4. Claim 15 recites the additional limitation of a program embodied on an information storage medium or carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).
 - g. Claim 17 is rejected per claim 14 with the rationale of the rejection of claim 6. Claim 17 recites the additional limitation of a program embodied on an information storage medium or carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).
 - h. Claim 18 is rejected per claim 14 with the rationale of the rejection of claim 7. Claim 18 recites the additional limitation of a program embodied on an information storage medium or carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).
5. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien in view of Gibson as applied to claims 3 and 14 above and further in view of Mazarak et al., "Animating Exploding Objects" (Mazarak).

- a. Referring to claim 5, the modified system of O'Brien as applied to claim 3 above does not explicitly disclose wherein the state change means of the state change propagation means determines at random whether or not a state of an elemental object is changed when a state of another elemental object which has a predetermined relationship with the elemental object and belongs to the same aggregate object as the elemental object has changed. Mazarak discloses the aforementioned limitation (page 4, column 1, paragraph 2). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the system of O'Brien with the teachings of Mazarak. The suggestion/motivation for doing so would have been to naturally simulate the existence of flaws in the material structure (Mazarak, page 4, column 1, paragraph 2).
 - b. Claim 16 is rejected per claim 14 with the rationale of the rejection of claim 5. Claim 16 recites the additional limitation of a program embodied on an information storage medium or carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).
6. Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claims 1 and 12 above further in view of U.S. Patent No. 5,261,041 to Susman.
 - a. Referring to claim 9, O'Brien does not explicitly disclose wherein a plurality of state change patterns are provided for the elemental objects, and an image of the changed elemental object is generated in accordance with a state change pattern selected from the plurality of state change patterns. Susman discloses the aforementioned limitation (column 1, lines 37-40 and column 18, line 49- column 19, line 2). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to

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modify the system of O'Brien with the teachings of Susman. The suggestion/motivation for doing so would have been to efficiently generate and manipulate animated objects in a computer controlled environment (Susman, column 4, lines 61-65), to achieve real-time performance, increase ease of use, make the animation system extensible, provide hardware independence, and allow data interchangeability (Susman, column 5, lines 15-68).

- b. Claim 20 is rejected per claim 12 with the rationale of the rejection of claim 9. Claim 20 recites the additional limitation of a program embodied on an information storage medium or carrier wave. O'Brien discloses the aforementioned limitation (column 5, lines 40-54).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Linzy McCartney** whose telephone number is **(703) 605-0745**. The examiner can normally be reached on Mon-Friday (8:00AM-5:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose
telephone number is (703) 306-0377.

ltm
April 15, 2003



MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600